(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 16 October 2003 (16.10.2003)

(10) International Publication Number WO 03/085113 A1

(51) International Patent Classification7: C12Q 1/68, G01N 33/50 // C12N 9:10 C12N 15/54,

(21) International Application Number:

PCT/IB03/01414

(22) International Filing Date:

4 April 2003 (04.04.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: PCT/IB02/01258

9 April 2002 (09.04.2002)

(71) Applicant (for all designated States except US): UNI-VERSITÄT BASEL [CH/CH]; Petersgraben 35, CH-4003 Basel (CH).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MEYER, Urs, Albert [CH/CH]; Wartenbergstrasse 31, CH-4104 Oberwil (CH). FRASER, David, John [US/CH]; Hagentalerstrasse 7, CH-4055 Basel (CH). KAUFMANN, Michel, R. [CH/CH]; Nonnenweg 56, CH-4055 Basel (CH). PODVINEC, Michael [CH/CH]; Davidsbodenstrasse 28, CH-4056 Basel (CH). ZUMSTEG, Adrian [CH/CH]; Rufacherstrasse 84, CH-4055 Basel (CH).

(74) Agent: E. BLUM & CO.; Vorderberg 11, CH-8044 Zürich (CH).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ENHANCER SEQUENCE OF THE 5-AMINOLEVULINIC ACID SYNTHASE GENE

(57) Abstract: Nucleic acid sequences mediating chemical compound induced 5-aminolevulinate synthase gene (ALAS1) expression are disclosed. Said sequences comprise at least a DR-4 binding site. Furthermore, in vitro methods for testing chemical compounds for modulation of heme and/or P 450 cytochromes synthesis are described.